glaucoma drops was 3.0. Duration of pre-op follow up was a mean of 8.7 years (SD 6.7). There was no significant difference between the type of Glaucoma and the outcome at m12, ANOVA (F = 1.687, df = 2, Sig. = 0.191). The mean preoperative highest IOP was 30.14 mmHg (95% CI 28.20-32.11), mean pre-operative listing IOP was 24.34 mmHg (95% CI 23.60-25.04), and the mean post op IOP was 14.8 mmHg (95% CI 14.5-15.1). Eyes achieving complete success (IOP ≤ 18 mmHg without treatment) was 76% (n = 76), and those with IOP ≤ 18 mmHg without or on 1 permanent glaucoma drop 88% (n = 88). A 30% IOP reduction compared to the highest recorded IOP without glaucoma drops, was achieved in 77% (n = 80)and a 30% drop in IOP compared to the highest IOP with or without 1 permanent glaucoma drop, achieved in 89% (n = 92). A 30% reduction in IOP c.f. the listing IOP was achieved in 61% (n = 63) of eyes without need for a drop, and a 30% drop in IOP with or without 1 permanent glaucoma drops in 65% (n = 67). An IOP ≤ 21 mmHg without drops was achieved in 91% (n = 95), whilst IOP ≤ 21mmHg with or without 1 permanent glaucoma drop in 95% (n = 99). Excluding NTG eyes (n = 16), IOP ≤ 21 mmHg without permanent drops was achieved in 90% (n = 79), and IOP ≤ 21 mmHg with or without a permanent drop in 94% (n = 83). There was no statistically significant difference in outcome between the two groups (viscocanalostomy and phacoviscocanalostomy), the t-test for Equality of Means (0.445, df 102, p = 0.657) for IOP at m 12. The commonest intra-operative complication was inadvertent perforation into the anterior chamber in 15% (n = 16), Early complications were defined as those observed within 2 weeks of surgery. Post-op (Day 1) hypotony defined as an IOP less than 5 with a shallow anterior chamber with or without choroidal detachment was evident in 1 case (1%) case. One phacoviscocanalostomy eye had developed Cystoid macular oedema at the 4 week post operative review which was responsive to medical treatment.
Conclusion: The complications following viscocanalostomy and combined viscocanalostomy and phacoviscocanalostomy in this group are lower than those reported in the National trabeculectomy study. The low rates of complications were similar to those observed in other studies evaluating viscocanalostomy or phacoviscocanalostomy. In our evaluation both the procedures were highly successful at 1 year review. Viscocanalostomy demands sound surgical skill, but it is not impossible for most ophthalmic surgeons to master the technique. We strongly feel this procedure could provide a safer, effective alternative to trabeculectomy. We hope to further evaluate individual pre-operative characteristics and the success, to help advance knowledge on individual glaucoma types and outcomes.

P60 Deep sclerectomy augmented with bevacizumab and mitomycin C - A comparative case-control study

Antigoni Koukkoulli[1], Fayyaz Musa[1], Nitin Anand[1]
[1]Calderdale & Huddersfield NHS Trust, Huddersfield - United Kingdom

Aim: To assess the comparative efficacy and safety of primary deep sclerectomy (DS) augmented with subconjunctival bevacizumab and intraoperative mitomycin C (MMC).
Methods: Retrospective comparative, case-control series of consecutive primary DSs between January 2008 and December 2010. 68 eyes of 66 patients were included, with 27 eyes in the MMC and 41 in the bevacizumab group. MMC (0.2 mg/ml for 2 minutes) was applied subconjunctivally before scleral flap dissection. Bevacizumab (2.5 mg in 0.1 ml) was injected subconjunctivally at the end of surgery. Complete success was IOP < 19 mmHg and a 20% decrease from baseline with no postoperative medications
Results: There were no significant differences between the groups except for a significantly longer follow-up of 29.7 ± 10.8 months in the MMC group compared to 21.1 ± 6.6 months for the bevacizumab group (p = 0.00). Complete success rates were 93% and 85% at one year and 89% and 81% at two years after DS in the bevacizumab and MMC groups respectively (p = 0.1). Mean IOPs were significantly lower in the MMC group (p = 0.003) at 11-13 months but not at prior or subsequent measured time-periods. At last follow-up, 3 eyes (11.1%) of MMC group and 1 eye (2.0%) of the bevacizumab group were on medications to control IOP (p = 0.6). Self-limiting complications were noted in 9 (22.0%) in bevacizumab and 7 (33.3%) in the MMC group (p = 0.8).
Conclusion: Augmentation of primary DS with subconjunctival bevacuzimab injection appears to be as efficacious as MMC augmentation with no additional side effects.

P61 Does the non absorbable implant Esnoper V-2000 from AJL works as good as the T-Flux from Zeiss in deep sclerectomy? 24 months follow-up

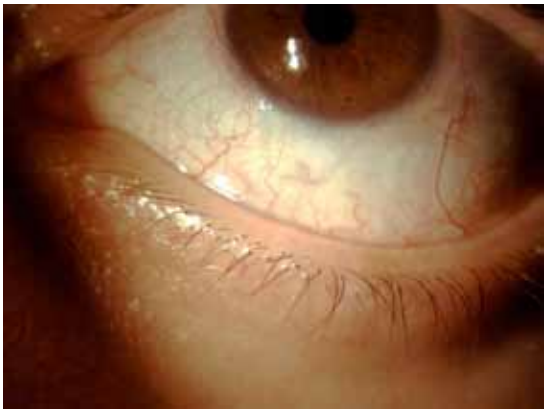
Konrad Schargel Palacios[1], Jose Belda Sanchis[1]
[1]Department Of Ophthalmology, Hospital de Torrevieja, Alicante - Spain

Purpose: To evaluate differences in intraocular pressure (IOP) and number of glaucoma medications between patients who have undertaken deep sclerectomy (DS) with non absorbable T-Flux Zeiss, Francia and Esnoper non absorbable implant V-2000 de AJL, Alava España devices, after 24 months of follow-up.
Methods: Retrospective comparative study. We that included 128 patients that had diagnosis of Open angle glaucoma or pseudoexfoliation glaucoma not control with full treatment or signs of progression in visual field or optic nerve. The two groups were A T- Flux (60 patients) and the Groep B Esnoper (68 patients)
All patient were done by two surgeons with experience in Deep sclerectomy, The surgery was in the standard way and both implants were place suprachoroidal and the sclera was close without suture just apposition. The only variation was the implants, selected in a randomize way T-flux or Esnoper devices were used as implants. The schedule visits were 1 week, 1, 3, 6, 12 and 24 months. IOP, Visual Acuity, progression of the glaucoma, Goniopunture and medication was register during following. Variables analyzed: IOP and number of drugs prior to and after surgery, need of goniopunture, needling and complications.

Results: The average time of follow-up was 24 ± 1 month. Primary open angle 108 patients (84.4%) and pseudoexfoliative glaucoma 10 patients (7.8%)and Normal tension Glaucoma 8 patients (6.3 %) were the most frequent diagnoses also 1 Uveitic glaucoma and 1 Pseudofaquic glaucoma were included. T-flux device was implanted in 60 eyes while Esnoper was implanted in 68 eyes. Antimetabolites were used in all cases. After one year of follow-up the mean IOP at baseline decreased from 25.42 ± 12.63 to 15.02 ± 3.48 for the T-flux group and from 23.33 ± 8.27 to 13.95 ± 3.92 for the Esnoper group,with a mean decrease in pressure of 45 % from inicial level showing no statistical difference between them ($p > 0.05$). The average number of glaucoma medications showed no statistical difference ($p > 0.05$) between both groups, decreasing from 2.81 ± 0.91 to 0.29 ± 0.70 for the T-flux group and from 2.66 ± 0.79 to 0.17 ± 0.51 for the Esnoper group. There was also no statistically significant difference in age, pachymetry, visual acuity, Axial Length or keratometry in both groups. Final IOP and the number of medications used by patients 24 months after surgery showed no statistically significant difference ($p > 0.05$) between both implants.
Conclusions: According to the results of our study no significant difference between the use of T-flux and Esnoper implants was found after two years of deep sclerectomy The level of IOP is 1 mm Hg lower in the ESnoper groups.

P62 The scleral flap - Alternative site for the fixation of drainage devices
Gysbert van Setten[1]
[1]St Eriks Eye Hospital, Stockholm - Sweden

Introduction: In deep sclerectomy the creation of a wound bed close to the uveal tract implies an increased difficulty to fixate drainage devices such as PDS sutures in the wound bed.
Methods: A alternative site for the fixation of fixate drainage devices such as PDS sutures was searched in the wound area. It was discovered that the easiest accessible alternative site was the exposed inverted surface of the scleral flap. After exposure and de-roofing of the Schlemm's canal a short section of PDS ™ (Ethicon , Johnson & Johnson) suture was fastened with 10-0 Ethilon™ (Ethicon, Johnson & Johnson) suture(s) without any problem. Then the flap was reversed and put into position.
Results: We herewith report on the first cases operated with the alternative fixation site. The fixation of the PDS ™ suture was easily achieved. The repositioning was uneventful. Postoperatively the roof-fixed PDS ™ suture was usually not distinguishable from the bed-fixed. The clinical picture and effect was not different from the established bed-fixed filtration devices.
Conclusion: Roof fixation of glaucoma drainage devices in techniques where a scleral flap is created does offer a safe alternative for some techniques. Depending on the fixation techniques also later fine positioning and suture tightening could be an option to optimize the location and function of the devices. The scleral flap itself hence is a suitable, yet less explored tissue surface that could be used to optimize safety and efficacy of glaucoma surgery.



P63 Mitomycin-augmented nonpenetrating deep sclerectomy in primary and secondary glaucoma
William Sponsel[1], Sylvia Groth[2]
[1]WESMDPA/UTSA Biomedical Engineering, San Antonio, Texas - USA, [2]University of Minnesota Medical School, Minneapolis, Minnesota - USA

Purpose: Nonpenetrating deep sclerectomy (NPDS) can enhance drainage of aqueous humor without disrupting the trabecular endothelial layer, reducing risks of postoperative hypotony and hyphema. This study explores associations of angle morphology with surgical efficacy in eyes with open and obstructed angles.
Methods: Eighty-nine consecutive eyes undergoing successful NPDS (non-implant, with 0.4 mg/ml mitomycin-C and limbus-based 2-layer closure) were studied in this IRB-approved retrospective quality assurance study. Postoperative complication frequency, IOP, glaucoma medications required, and acuity were monitored (baseline versus 3-,6-,9-,12-&18-month postoperative levels), along with 30-2 Humphrey MD and CPSD (baseline versus 6-,12-,&18-month postoperative values). Preoperative gonioscopy was compared with the subsequent requirement for specific postoperative interventions.
Results: IOP at all 5 post-operative intervals was reduced [22 ± 0.9 to 12 ± 0.5 mmHg ($p < 0.0001$)]. No hyphemata were observed. Hypotony (IOP < 4) occurred rarely (8/445; 1.8%). Mean glaucoma medication use dropped from 3.1 ± 0.1 to 0.23 ± 0.1 at 18 months ($p < 0.0001$). Mean 30-2 MD improved by ~1.4 dB at 6, 12, & 18 months ($p < 0.002$); CPSD remained stable.
Conclusions: Following NPDS, sustained IOP decrease of 10mmHg (45%) was attained, with stable acuity, increased perimetric generalized light sensitivity, and 90% reduction in medical therapy requirement. Morbidity risk was associated with narrow gonioscopic angle insertion and synechia, but not by shallow approach or trabecular pigmentation.